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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RYMAN, DANIEL J	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/799,913	NEWBERG ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,9-11 and 13-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13,14 and 19-21* is/are allowed.

6)☒ Claim(s) *1-3,5,9-11,15-18 and 22-24* is/are rejected.

7)☒ Claim(s) *1,5 and 11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. The indicated allowability of claims 1-3, 5, and 9-11 is withdrawn in view of the newly discovered reference(s) to Smith et al. (USPN 6,714,557), Oliver (USPN 6,292,484), and Cantoni et al. (USPN RE37,494). Rejections based on the newly cited reference(s) follow.

2. Applicant's arguments with respect to claims 1-3, 5, 9-11, 23, and 24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 1 is objected to because of the following informalities: in line 10, "and b) does" should be "and c) does". Appropriate correction is required.

4. Claims 5 and 11 are objected to because these claims are duplicates of one another. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 15-18, and 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 15 discloses that the received synchronization field is compared against a single target synchronization pattern and when the received synchronization field does not match the target field then the burst is discarded. However, claim 12, which claim 15 depends upon, discloses that the received synchronization field is compared against two target synchronization

patterns and is processed according to which pattern the field matched. From the claims it is unclear if a burst would be discarded or further processed when its synchronization field matches one target but not the other.

8. Claim 17 discloses that if the received synchronization field matches the first synchronization pattern, then a first operating mode is selected. Similarly, claim 17 discloses that if the received synchronization field matches the second synchronization pattern, then a second operating mode is selected. Claim 13, which claim 17 depends upon, discloses that when the received synchronization field matches the first synchronization pattern, then a payload is processed as voice, and when the received synchronization field matches the second synchronization pattern, then packet is processed as non-voice. From the claims it is unclear if the first mode and second mode correspond to voice and non-voice, respectively, or if the "mode" limitation encompasses a broader scope of coverage.

9. Claim 22 discloses that, when a burst comprising a signaling field is received, a pattern in the signaling field is compared to a known synchronization pattern. However, claim 13, which claim 22 depends upon, discloses that a field can be either a signaling field or a synchronization field where a synchronization field contains a synchronization pattern. Thus, claim 13 seems to imply that a signaling field would not contain a synchronization pattern. Since claim 22 explicitly discloses that a signaling field contains a synchronization pattern, it is unclear whether the "signaling field" in claim 22 should be "synchronization field" or whether the signaling field and synchronization field are in fact identical.

10. Claims 23 and 24 disclose that the signaling field either a) begins a new packet, completes a packet, or does not begin or complete a packet or b) identifies a second type of

information. However, the phrase "does not begin or complete a packet" would include a field that "identifies a second type of information" since a field that identifies a second type of information does not signal the start or end of a packet. Therefore, Examiner suggests changing "does not begin or complete a packet" to "signals a segment of a packet that neither begins nor completes the packet."

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1-3, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 6,714,557) in view of Oliver (USPN 6,292,484) in further view of Cantoni et al. (USPN RE37,494).

13. Regarding claims 1 and 24, Smith discloses in a wireless communication system with an air interface comprising a plurality of bursts (col. 1, lines 31-33), a method comprising the step of defining a plurality of bursts, wherein each burst (time slot) comprises a field (overhead) embedded within the burst (col. 2, lines 52-col. 3, line 13); and wherein the field is one taken from the group of a synchronization field (preamble) and a signaling field (other fields in overhead) (col. 2, lines 52-col. 3, line 13) wherein the claim only requires that each burst have at least one field and this one field be a synchronization field or a signaling field such that the "field" in one burst could be the preamble and the "field" in another burst could be a signaling field; and wherein, when the field is a synchronization field, defining a position of at least one

subsequent burst comprising the signaling field (col. 5, lines 16-21); and wherein at least one burst comprising the signaling field carries a) link control signaling (e.g. guard time) (col. 3, lines 28-33) or a second type of information and b) framing information (col. 5, lines 16-22) for the link control signaling or the second type of information.

Smith does not expressly disclose that, when the field is a synchronization field, defining a position of at least one subsequent burst comprising the synchronization field; however, Smith does disclose that the synchronization field can be eliminated for a predetermined number of slots (col. 4, line 48-col. 5, line 7). Oliver teaches, in a TDMA communication system, using an offset to indicate the position of a subsequent embedded field (col. 3, lines 40-62) in order to allow the receiver to correctly ascertain the positions of fields in the data stream (col. 4, lines 22-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to define a position of at least one subsequent burst comprising the synchronization field in order to allow the receiver to correctly ascertain the position of the synchronization field when the synchronization field has been eliminated for a predetermined number of slots.

Smith in view of Oliver does not expressly disclose that, when the field is a signaling field, defining an indicator to identify that payload in the burst either a) begins a new packet, completes a packet, or signals a segment of a packet that neither begins nor completes the packet or b) identifies a second type of information. Cantoni discloses, in a TDMA communication system, defining an indicator to identify that payload in the burst either a) begins a new packet, completes a packet, or signals a segment of a packet that neither begins nor completes the packet (col. 3, lines 65-66 and col. 4, line 59-col. 5, line 9) in order to allow a packet that is larger than the size of the time slot to be transmitted and correctly received (col. 1, lines 53-60 and col. 2,

lines 40-50). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to define, when the field is a signaling field, an indicator to identify that payload in the burst either a) begins a new packet, completes a packet, or signals a segment of a packet that neither begins nor completes the packet in order to allow a packet that is larger than the size of the time slot to be transmitted and correctly received.

14. Regarding claim 2, Smith in view of Oliver in further view of Cantoni discloses that the signaling field carries non-voice information (Oliver: col. 3, lines 40-62).

15. Regarding claim 3, Smith in view of Oliver in further view of Cantoni discloses that each burst comprising the signaling field comprises one of a link control signaling (e.g. guard time) (Smith: col. 3, lines 28-33), and an encryption parameter.

16. Regarding claim 23, Smith in view of Oliver in further view of Cantoni discloses that if the field is a signaling field and the signaling field is not one taken from the group of a) begins a new packet, b) completes a packet, and c) signals a segment of a packet that neither begins nor completes the packet then it identifies a second type of information (single slot message) (Cantoni: col. 5, lines 6-9).

17. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 6,714,557) in view of Oliver (USPN 6,292,484) in further view of Cantoni et al. (USPN RE37,494) as applied to claim 1 above, and further in view of Jordan et al. (USPN 2004/0083393).

18. Regarding claims 5 and 11, Smith in view of Oliver in further view of Cantoni does not expressly disclose that an encryption parameter is carried in one of the bursts comprising the signaling field, and wherein a receiving device of the plurality of bursts knows a location of the

burst carrying the encryption parameter a priori. However, Smith in view of Oliver in further view of Cantoni does disclose having the receiving device know the location of a burst carrying particular information a priori (Oliver: col. 3, lines 40-62). Jordan teaches, in a wireless communication system, sending a new password key identifier (i.e. encryption information) (Fig. 7 and para. 72) in order to dynamically change password keys (para. 11) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to carry the encryption parameter in one of the bursts comprising the signaling field, wherein a receiving device of the plurality of bursts knows a location of the burst carrying the encryption parameter a priori in order to dynamically change password keys.

19. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (USPN 6,714,557) in view of Oliver (USPN 6,292,484) in further view of Cantoni et al. (USPN RE37,494) as applied to claim 1 above, and further in view of Fackenthal et al. (USPN 2003/0061558).

20. Regarding claim 9, Smith in view of Oliver in further view of Cantoni does not expressly disclose that the link control signaling is formed into a matrix, having rows and columns, prior to forward error correction encoding, wherein the rows of the matrix are encoded with a block code, and wherein the columns of the matrix are encoded with a parity checksum. Fackentahl discloses an error correcting matrix with Hamming code encoded rows and parity coded columns (see claims 1-3) where it is implicit that this ensures that important signaling information is not lost or corrupted. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the link control signaling into a matrix, having rows and columns, prior to forward error correction encoding, wherein the rows of the matrix are encoded with a block

code, and wherein the columns of the matrix are encoded with a parity checksum in order to ensure that important signaling information is not lost or corrupted.

21. Regarding claim 10, Smith in view of Oliver in further view of Cantoni in further view of Fackenthal does not expressly disclose that the block code is a Hamming (l6, 11) code; however, Smith in view of Oliver in further view of Cantoni in further view of Fackenthal does disclose the use of a Hamming code (Fackenthal: claims 1-3). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Smith in view of Oliver in further view of Cantoni in further view of Fackenthal discloses the use of a Hamming code, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any Hamming code, including Hamming code (16,11), absent a showing of criticality by Applicant.

Allowable Subject Matter

22. Claims 13, 14, and 19-21 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665

ALPUS H. HSU
PRIMARY EXAMINER